



Department of Commerce

Safety & Buildings Division

201 West Washington Avenue

P.O. Box 2658

Madison, WI 53701-2658

Evaluation # 200127-O

Wisconsin Building Products Evaluation

Material

Prefabricated Drainage System AKWADRAIN™
Tradename: "Drainstar A®" Stripdrain

Manufacturer

American Wick Drain Corporation
1209 Airport Road
Monroe, NC 28110

Provided by:

KOCH Waterproofing Solutions
800 Irving Wick Drive W
Heath, OH 43056

SCOPE OF EVALUATION

Drainstar A® Stripdrain, a prefabricated foundation drainage system, provided by KOCH Waterproofing Solutions, was evaluated as a **supplement** to code-required drainage systems at below ground foundation walls, in accordance with:

- The requirements of **s. Comm 21.17** of the current edition of the Wisconsin Administrative Uniform Dwelling Code (for 1 & 2 family dwellings). See LIMITATIONS OF APPROVAL section.

Drainstar A® Stripdrain, a prefabricated foundation drainage system, provided by KOCH Waterproofing Solutions, was evaluated as a **total** foundation drainage system at below ground foundation walls, in accordance with:

- The requirements of **Table 53-IX A** of the current edition of the Wisconsin Administrative Building And Heating, Ventilating And Air Conditioning Code. See LIMITATIONS OF APPROVAL section.

Drainstar A[®] Stripdrain, a prefabricated foundation drainage system, provided by KOCH Waterproofing Solutions, was evaluated as a **total** foundation drainage system at below ground foundation walls, in accordance with:

- The requirements of **Section 1806.4.2** of the Wisconsin Amended ICC 2000 Code (**eff. 7/1/02**). See LIMITATIONS OF APPROVAL section.

DESCRIPTION AND USE

Drainstar A[®] Stripdrain, a composite drainage system, consists of a 3-dimensional, high-flow, drainage core and a non-woven, needle-punched filter fabric. Drainstar A[®] Stripdrain designed for use as a **supplement** to and/or a **total** subsurface drainage system at below ground foundation walls. See SCOPE OF EVALUATION and LIMITATIONS OF APPROVAL sections of this evaluation.

The filter fabric is wrapped and bonded to the drainage core, preventing intrusion of the filter fabric into the flow channels during the back fill process. Soil particles are held back by the filter fabric, allowing water to pass through to the drainage core.

Drainstar[®] is 1 inch in depth, available in standard nominal widths of 6, 12, 18, 24 and 36 inches and rolled lengths of 50 feet to 500 feet.

COMPONENTS: **Rigid Core** is thermoformed from a black extruded plastic to form an internal dimpled drainage core with a 1-inch depth. **Filter Fabric**, a geotextile, made from black polypropylene, non-woven and needle-punched for water flow. **Straight Connectors** are splice rolls of Drainstar A[®] using a minimum of 3 inches of polyethylene underground tape at each joint. **Tee Connectors** join one (1) run or branch of Drainstar A[®] to another at a 90° angle. A minimum of 3 inches of polyethylene underground tape is used to secure each joint. **Outlet Fittings** are black plastic fittings used to connect Drainstar A[®] to the drainage piping, using a minimum of 3 inches of polyethylene underground tape at the joint.

INSTALLATION: Drainstar A[®] foundation drainage system is installed on the exterior of below-grade foundation or retaining walls to provide perimeter drainage. Waterproofing is installed on the foundation or retaining wall in accordance with the applicable code (see SCOPE OF EVALUATION on page one), and allowed to partially cure. The Filter Fabric adheres to the partially cured waterproofing. When Drainstar A[®] is applied to cured waterproofing, or concrete foundations, an adhesive, compatible with the drainage material or mechanical means, i.e., insulation anchors are used to hold the Drainstar A[®] in place. An Outlet Fitting is attached to the end of the drain and a 4-inch plastic pipe is attached to the Outlet Fitting. The perimeter drain shall discharge by gravity or mechanical means into a drainage system. The foundation or retaining wall is then back-filled with native material compacted to required density as required by the pertinent code.

TESTS AND RESULTS

GeoSyntec Consultants conducted physical properties and flow rate testing in accordance with:

- ASTM D1621 or D695, Shear & Compressive strength, 6000-9500 lbs./sq. ft.,

- ASTM D4716, In-plane flow, 21 gpm/ft. of width, Hydraulic gradient = 0.1, loading = 10 psi, Unobstructed inflow area, pavement side 85%,
- ASTM D4632, Grab tensile strength and elongation,
- ASTM D4751, Apparent opening size (AOS),
- ASTM D4491, Permeability and Flow rate, and
- ASTM D G21, Fungus resistance.

LIMITATIONS OF APPROVAL

Drainstar A[®] Stripdrain drainage system shall only be installed as a **supplement** to conventional (CODE REQUIRED), sand or gravel covered drain pipes around 1 & 2 family dwellings at below-ground foundation walls.

Drainstar A[®] Stripdrain drainage system may be installed as an alternative to conventional sand or gravel covered drain pipes.

Drainstar A[®] Stripdrain drainage system may be installed as a **total** foundation drainage system at below-ground masonry foundation walls of commercial and multi-family dwellings, as required by **Table 53-IX A** of the Wisconsin Administrative Building And Heating, Ventilating And Air Conditioning Code.

Drainstar A[®] Stripdrain drainage system may be installed as a **total** foundation drainage system at below-ground masonry foundation walls of commercial and multi-family dwellings, as required by **Section 1806.4.2** of the Wisconsin Amended ICC 2000 Code (**eff. 7/1/02**).

Drainstar A[®] Stripdrain drainage system shall be installed with the following soil types, as defined by the Unified Soil Classification System (USCS): GC, GM, SC, SM, SP or SW.

Drainstar A[®] Stripdrain drainage system shall be installed in accordance with the manufacturer's installation instructions and this evaluation. Where the manufacturer's installation instructions and this evaluation differ, this evaluation shall be null and void.

After installation, Drainstar A[®] Stripdrain drainage system shall not be exposed to sunlight for more than 15 days.

When adhesives are used to attach the Drainstar A[®] Stripdrain drainage system to foundation or retaining walls, the American Wick Drain Corporation must provide written verification to the owner or installer verifying compatibility.

This approval will be valid through December 31, 2006, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the department. The Wisconsin Building Product Evaluation number must be provided when plans that include this product are submitted for review.

DISCLAIMER

The department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement not specified in this document.

Revision Date:

Approval Date: November 27, 2001

By: _____

Lee E. Finley, Jr.

Product & Material Review

Integrated Services Bureau

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